

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 1. (Original) A method for using electrostatic forces to align
2 semiconductor chips relative to each other, comprising:
3 electrically charging a first set of conductors on a first chip;
4 electrically charging a second set of conductors on a second chip;
5 placing the first chip face-to-face with the second chip, so that the first set
6 of conductors is in close proximity to the second set of conductors; and
7 allowing electrostatic forces between the first set of conductors and the
8 second set of conductors to bring the first chip into alignment with the second
9 chip.

1 2. (Original) The method of claim 1, wherein the process of electrically
2 charging the first set of conductors and the second set of conductors takes place
3 after the first chip is placed face-to-face with the second chip.

1 3. (Original) The method of claim 1, wherein the process of electrically
2 charging the first set of conductors and the second set of conductors involves
3 applying a changing pattern of voltages to the first set of conductors and the
4 second set of conductors.

1 4. (Original) The method of claim 1, further comprising vibrating the first
2 chip and/or the second chip to facilitate aligning the first chip and the second chip.

1 5. (Original) The method of claim 1, further comprising applying a
2 lubricant between the first chip and the second chip to reduce frictional forces
3 between the first chip and the second chip during the alignment process.

1 6. (Original) The method of claim 1, wherein placing the first chip face-to-
2 face with the second chip involves using a mold as a guide to facilitate bringing
3 the first set of conductors in close proximity to the second set of conductors.

1 7. (Original) The method of claim 1, wherein a pattern formed by the first
2 set of conductors matches a pattern formed by the second set of conductors.

1 8. (Original) The method of claim 1, wherein the first set of conductors
2 and the second set of conductors are arranged in a checkerboard pattern.

1 9. (Original) The method of claim 1, wherein the first set of conductors
2 and the second set of conductors are arranged in a pattern of concentric circles.

1 10. (Original) The method of claim 1, wherein the first set of conductors
2 and the second set of conductors are arranged in a pattern with an autocorrelation
3 approaching an impulse.

1 11. (Original) The method of claim 1, wherein the electrostatic forces
2 between the first set of conductors and the second set of conductors include
3 attractive forces and/or repulsive forces.

1 12. (Original) The method of claim 11, wherein the electrostatic forces
2 between the first set of conductors and the second set of conductors generate a net

3 repulsive force that levitates the first chip over the second chip, thereby reducing
4 frictional forces between the first chip and the second chip.

1 13. (Original) The method of claim 1, wherein the first set of conductors
2 comprises part of a power network and/or a ground network of the first chip.

1 14. (Original) The method of claim 1, wherein electrically charging the
2 first set of conductors on the first chip involves charging different conductors to
3 different voltage levels.

1 15. (Original) The method of claim 1, wherein electrically charging the
2 first set of conductors involves using electron-implanted charges.

1 16. (Original) The method of claim 1, further comprising bonding the first
2 chip with the second chip after the first chip is brought into alignment with the
3 second chip.

1 17-33. (Canceled).